

WHAT IS CLAIMED IS:

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1. A circuit breaker comprising:  
trip circuitry;  
a microprocessor; and  
a test signal generator incorporated in said circuit breaker for providing test signals to said trip circuitry under control of said microprocessor.
2. The circuit breaker of claim 1, wherein said test signal generator comprises either a current source, a voltage source or both for generating said test signals.
3. The circuit breaker of claim 1, further comprising a standard interface connected to said microprocessor for connecting to a corresponding standard interface on a general purpose computing device.
4. The circuit breaker of claim 3, wherein said standard interface is a USB interface.
5. The circuit breaker of claim 3, wherein said standard interface is an IEEE 1394 interface.
6. The circuit breaker of claim 3, wherein said standard interface is an RS232 interface.
7. The circuit breaker of claim 1, further comprising a wireless interface connected to said microprocessor.
8. The circuit breaker of claim 7, wherein said wireless interface is a radio frequency transceiver.

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9. The circuit breaker of claim 7, wherein said wireless interface is an infra-red transceiver.

10. The circuit breaker of claim 1, further comprising a network interface connected to said microprocessor for connecting said microprocessor to a data network.

11. The circuit breaker of claim 1, further comprising at least one switch in a connection between said trip circuitry and said test signal generator, said switch being controlled by said microprocessor, said switch being open when said trip circuitry is not being tested so as to prevent erroneous test signals from causing a response by said trip circuitry.

12. The circuit breaker of claim 1, further comprising:  
a receptacle forming a gap in a connection between said trip circuitry and said test signal generator; and  
a key for insertion in said receptacle to bridge said gap allowing communication between said trip circuitry and said test signal generator.

13. The circuit breaker of claim 12, wherein said key is a rating plug.

14. A method of testing a circuit breaker comprising testing trip circuitry of said circuit breaker with test signals generated with a test signal generator that is incorporated in said circuit breaker.

15. The method of claim 14, wherein said testing further comprises generating either a current or a voltage test signal with a current source or a voltage source of said test signal generator.

16. The method of claim 14, further comprising controlling said testing with a general purpose computing device connected to said circuit breaker through a standard interface.

17. The method of claim 14, further comprising controlling said testing with a general purpose computing device communicating with said circuit breaker through a wireless interface.

18. The method of claim 14, further comprising controlling said testing through a network to which said circuit breaker is connected via a network interface.

19. The method of claim 14, further comprising preventing erroneous test signals from causing a response by said trip circuitry with at least one switch in a connection between said trip circuitry and said test signal generator, said switch being controlled so as to be open when said trip circuitry is not being tested.

20. The method of claim 14, further comprising enabling said testing by inserting a key in a receptacle forming a gap in a connection between said trip circuitry and said test signal generator, said inserted key bridging said gap thereby allowing communication between said trip circuitry and said test signal generator.

21. The system of claim 14, further comprising means for preventing erroneous test signals from causing a response by said trip circuitry.

22. The system of claims 21, wherein said means for preventing erroneous test signals from causing a response by said trip circuitry comprise a switch in a connection between said trip circuitry and said test signal generator, said switch being controlled so as to be open when said trip circuitry is not being tested.

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23. The system of claim 21, wherein said means for preventing erroneous test signals from causing a response by said trip circuitry comprise a key for insertion in a receptacle that forms a gap in a connection between said trip circuitry and said test signal generator, said key, when inserted, bridging said gap thereby allowing communication between said trip circuitry and said test signal generator.

24. A system for testing a circuit breaker comprising  
first means for generating test signals, said first means being incorporated in said circuit breaker; and  
second means for testing trip circuitry of said circuit breakers with said test signals.

25. The system of claim 24, wherein said first means further comprise means for generating either current or voltage test signals or both.

26. The system of claim 24, further comprising means for controlling said testing with a general purpose computing device connected to said circuit breaker through a standard interface.

27. The system of claim 24, further comprising means for controlling said testing with a general purpose computing device communicating with said circuit breaker through a wireless interface.

28. The system of claim 24, further comprising means for controlling said testing through a network to which said circuit breaker is connected via a network interface.